

Notice of Allowability

Application No.

10/713,430

Examiner

Stephen M. D'Agosta

Applicant(s)

WU ET AL.

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the RCE and IDS submitted on 11-9-2007.
2. ☒ The allowed claim(s) is/are 5-8 and 13-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114.

- Applicant's ***IDS*** submission filed on 11-9-2007 has been entered.
- Claims 5-8 and 13-20 are allowed while claims 1-4, 9-12 and 21 are cancelled.

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

1. In the examiner's opinion, allowed claim 13 from the application can be considered the broadest claim. It will be from this vantage point that the analysis is performed.

a. The received International Search Report did not examine the claims as amended in the prosecution of this case. Hence that is a moot document since the art cited may have read on the claims of that international case but not on the allowed claims in this case (eg. having been amended).

b. Claim 13 states:

"A system to enhance fairness and performance in a multi-hop ad hoc network, the system comprising:

a first processor configured to provide contention synchronization information regarding a transmission between a first set of nodes of the network, and configured to provide the information to a second set of nodes in a range of two hops from the first set of nodes participating at the transmission;

a second processor configured to set a waiting time for the first set of nodes after a successful finish of the transmission, in which the first set of nodes back-off from accessing a transmission medium;

a first node configured to receive a transmission request or a transmission clearance, and configured to generate a black burst energy signal by each such receipt, the black burst energy signal indicating a busy time of the transmission medium according to a mapping scheme to provide the contention synchronization information; and

a wireless local area network,

wherein, in the first node, the transmission request comprises a request-to-send packet, the transmission clearance comprises a clear-to-send packet, and the waiting time comprises a time for a request-to-send/clear-to-send handshaking and a total back-off time of a minimum contention window".

c. None of the prior art discloses a "a first node configured to receive a transmission request or a transmission clearance, and configured to generate a black burst energy signal by each such receipt, the black burst energy signal indicating a busy time of the transmission medium according to a mapping scheme to provide the contention synchronization information" hence this point is novel, especially since it requires said signal to indicate a busy time according to a mapping scheme.

d. It is also the examiner's opinion that the prior art of record does not fully disclose "wherein, in the first node, the transmission request comprises a request-to-send packet, the transmission clearance comprises a clear-to-send packet, and the waiting time comprises a time for a request-to-send/clear-to-send handshaking and a total back-off time of a minimum contention window" hence this point is novel, especially since it requires

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the waiting time to be comprised of a time for RTS/CTS handshaking **AND** a total back-off time of a minimum contention window.

e. It is the examiner's opinion that the prior art contained in the IDS does not fully read on any of the allowed claims. He therefore upholds his allowance.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

STEVE M. D'AGOSTA
PRIMARY EXAMINER


2-12-08
